

# ZERO SHUTDOWN



AN INTELLIGENT SYSTEM WHICH  
DECIDES TO RUN BACKUP  
POWER BEFORE ANY ABNORMAL  
SHUTDOWN OF PRIMARY POWER



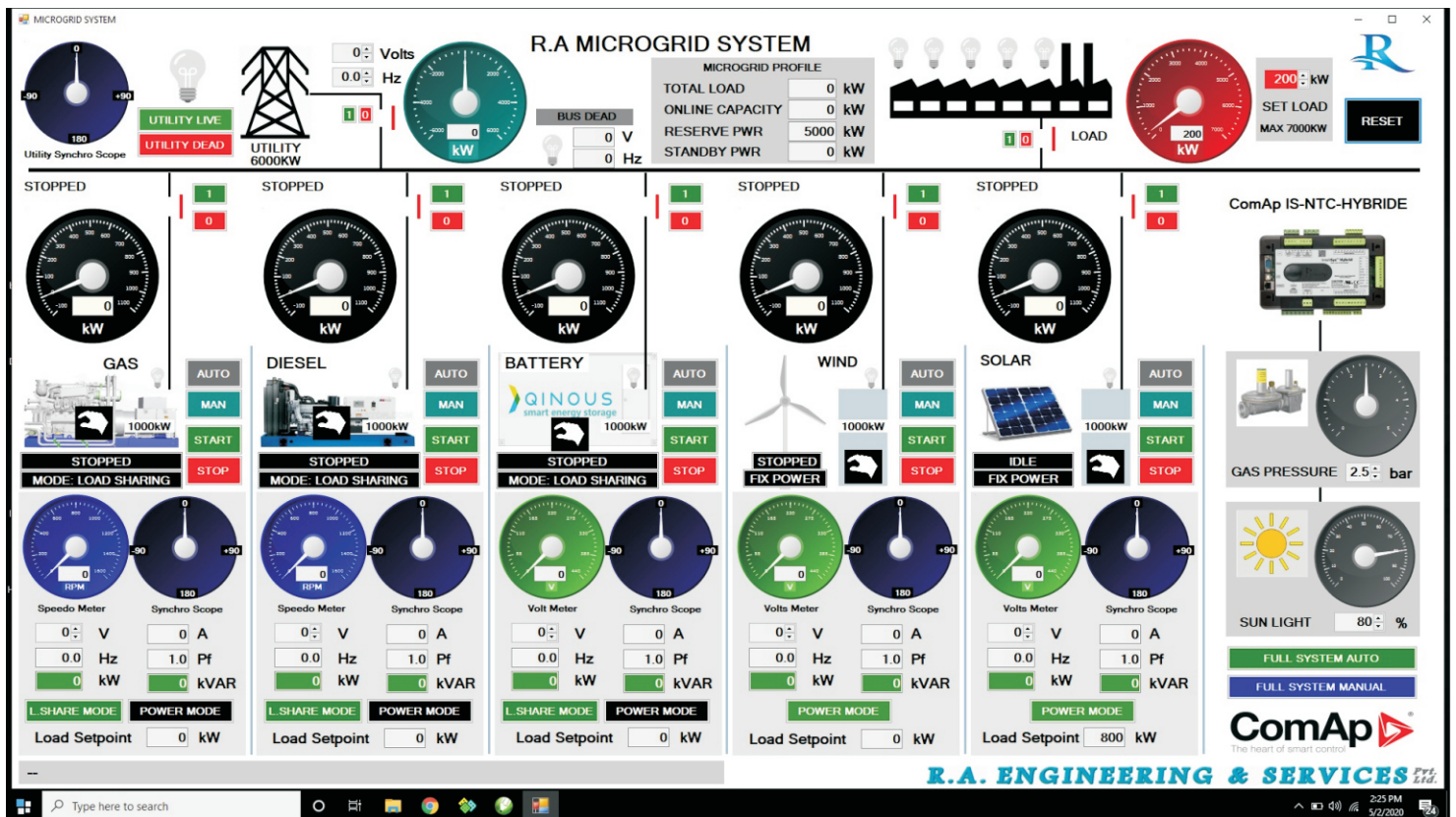
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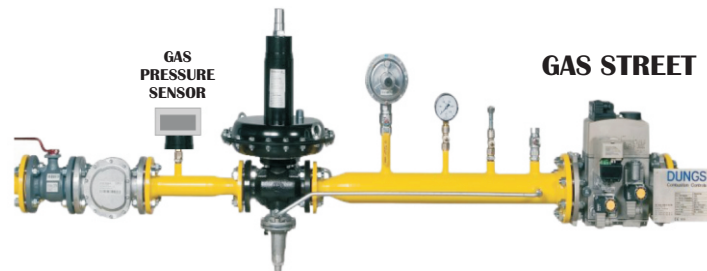
# MICROGRID SOFTWARE

## THE HEART OF ZERO SHUTDOWN SYSTEM



# WHAT IS ZERO SHUTDOWN SYSTEM

Zero Shutdown System is an intelligent monitoring and control system, which keep the eyes on the primary source of power generation and if any limitation occurs then this system takes quick action and starts and synchronizes the secondary source of the power generation like Grid supply or DG sets. In case of drop in the gas supply pressure, instead of stopping the gas generators, this system limits the load on gas gensets so the power generation on gas remain online with limited capacity.



The heart of this system is IntelliSysNTC Hybrid

## ► IntelliSys<sup>NTC</sup> Hybrid

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IntelliSys<sup>NTC</sup> Hybrid controller offers complex control of PV/Diesel hybrid applications (microgrids). It allows smooth integration of renewable energy to conventional power generation from reciprocating gen-sets while maintaining high reliability, safety and efficiency of the site.

### Key Functions

- ◆ Modbus RTU/TCP\*\* interface to multiple PV inverters
- ◆ Protection against gen-set underloading
- ◆ Dynamic spinning reserve management for
- ◆ maximized fuel savings
- ◆ Support of up to 100% renewable energy penetration\*



### Key Features

- Extensive flexibility due to built-in PLC
- Interface with various site components (PV inverters, BMS, gen-set controllers, etc.)
- Smooth integration of renewable energy source(s) with genset(s), energy storage systems and the grid
- Direct PV output power control (analog/digital or Modbus)
- Continuous monitoring and control of all energy sources (Actual power output from: PV, Genset, Battery and grid)
- Statistics of generated energy and fuel consumption
- Long term renewable energy penetration calculation
- Inputs and outputs configurable for various customer needs
- Interface to remote display units (InteliVision 8, InteliVision 5 RD, InteliVision 12Touch, InteliVision 18Touch)
- USB 2.0 slave interface
- Ethernet, Modbus and CAN communication
- Pre mortem history (50 records)
- Event-based history (up to 4000 records)
- 160 additional programmable protections



*ComAp Products Compliance with  
IEEE and American Standard C37.2-1970.  
( Protective Devices Classification )*

*Submitted By..  
( R.A Engineering & Services Pvt. Ltd. Pakistan )*



*ComAp Products Certifications & Approval Standards ..*





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***Thanks for your time***  
***(R.A. Engineering)***